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Pegden

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(54) **SYSTEM AND METHOD FOR CREATING INTELLIGENT SIMULATION OBJECTS USING GRAPHICAL PROCESS DESCRIPTIONS**

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G06F 9/44 (2006.01)

(52) **U.S. Cl.** **717/105; 717/113; 717/116; 717/134**

(58) **Field of Classification Search** None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,778,227 A * 7/1998 Jordan 1/1
5,809,506 A * 9/1998 Copeland 1/1

5,838,973 A * 11/1998 Carpenter-Smith et al. .. 717/105
5,907,706 A * 5/1999 Brodsky et al. 717/105
5,911,070 A * 6/1999 Solton et al. 717/105
5,923,867 A * 7/1999 Hand 703/14
5,978,581 A * 11/1999 Sadiq et al. 717/104
5,983,016 A * 11/1999 Brodsky et al. 717/104
6,052,526 A * 4/2000 Chatt 717/136
6,199,195 B1 * 3/2001 Goodwin et al. 717/104
6,226,792 B1 * 5/2001 Goiffon et al. 717/120
7,421,715 B1 9/2008 Margulis et al.
2003/0016246 A1 1/2003 Singh
2005/0010598 A1 1/2005 Shankar
2005/0257194 A1 11/2005 Morrow et al.

OTHER PUBLICATIONS

Claude Dennis Pegden. Future directions in future directions in simulation modeling. Winter Simulation Conference'2005. pp. 1-35.*

* cited by examiner

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(57) **ABSTRACT**

An object-oriented, computer-based system for developing simulation models is provided. The system comprises one or more base objects and one or more graphical processes, wherein new objects are created from base objects by a user by assigning one or more graphical processes to the base object(s). New objects are created without the need for methods or computer programming. A model is built by creating objects that represent the physical components of the system being modeled into the model, and then running the model.

13 Claims, 13 Drawing Sheets

